Installation

This chapter provides procedures for installing the Cisco 1711 and Cisco 1712 Security Access routers and includes the following sections:

- Before Installing the Router
- Connecting the Router to Your Local Network
- Connecting the Router to Your Service Provider's Equipment
- Connecting Networked Devices to the Router's Switch Ports
- Connecting Power to the Router
- Verifying Your Installation
- Optional Installation Steps

Before Installing the Router

The Cisco 1711 and Cisco 1712 Security Access routers are shipped ready for desktop mounting. Before making the power and network connections, simply set the router on a desktop, shelf, or other flat surface.

Note   For instructions on wall-mounting the router, see the "Wall-Mounting" section on page 2-14.

Be sure to read the safety information in the *Regulatory Compliance and Safety Information for Cisco 1700 Routers* document that came with your router.

Warning   **Read the installation instructions before you connect the system to its power source.**

Warning   **Do not work on the system or connect or disconnect cables during periods of lightning activity.**

Caution   Do not place anything on top of the router that weighs more than 10 pounds (4.5 kg). Excessive weight on top of the router could damage the chassis.

Connecting the Router to Your Local Network

The Cisco 1711 and Cisco 1712 Security Access routers are connected to your local Ethernet network through the yellow 10/100 Ethernet port. You must provide the following items for this connection:

- A straight-through, RJ-45-to-RJ-45, Ethernet cable
- A 10/100-Mbps Ethernet hub or switch

Warning   **The ports labeled 10/100 ETHERNET and CONSOLE are safety extra-low voltage (SELV) circuits. SELV circuits should only be connected to other SELV circuits. Because BRI circuits are treated like telephone-network voltage, avoid connecting the SELV circuits to the telephone network voltage (TNV) circuits. (To see translated versions of this warning, refer to the *Regulatory Compliance and Safety Information for Cisco 1700 Routers* document that came with the router.)**

Caution   Always connect the Ethernet cable to the yellow ports on the router. Do not connect the cable to an ISDN S/T or U port (on a WIC) or to an NT-1 that is connected to a WIC. Accidentally connecting the cable to the wrong port can damage your router.

The Cisco 1711 Security Access router is a fixed configuration router that includes a 1-port analog modem card (WIC-1-AM) that is installed in the WAN interface card (WIC) slot 1.

The Cisco 1712 Security Access router is a fixed configuration router that includes a 1-port Integrated Services Digital Network Basic Rate Interface (ISDN-BRI) S/T interface card (WIC-1B-S/T) that is installed in WIC slot 1.

Both the Cisco 1711 and Cisco 1712 Security Access routers also include an integrated 4-port 10/100-Mbps Ethernet switch in WIC slot 0, which is supported only on secure Cisco IOS images.

Note   For additional information and technical specifications about the 1-port analog modem interface, WIC-1-AM card, refer to the *V.90 Modem WAN Interface Cards on the Cisco 1700 Series Routers.*

For additional information and technical specifications about the 1-port ISDN BRI (S/T interface), WIC-1B-S/T card, refer to the *Cisco 3600/2600 Series ISDN BRI Connectivity Options.*
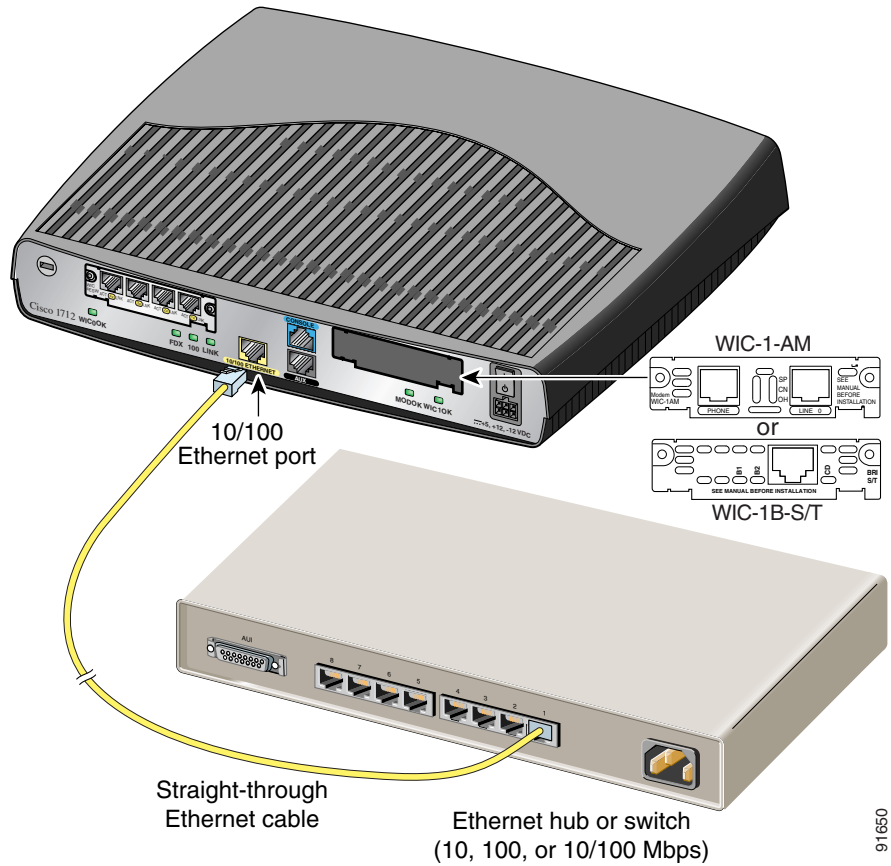
Note   The WIC-1-AM, WIC-1B-S/T and the Ethernet switch WIC are not field replaceable.

To connect the Cisco 1711 Security Access router or the Cisco 1712 Security Access router to the local network, follow these steps:

Step 1   Connect one end of the cable to the yellow Ethernet port (labeled 10/100 ETHERNET), as shown in Figure 2-1 on page 2-4.
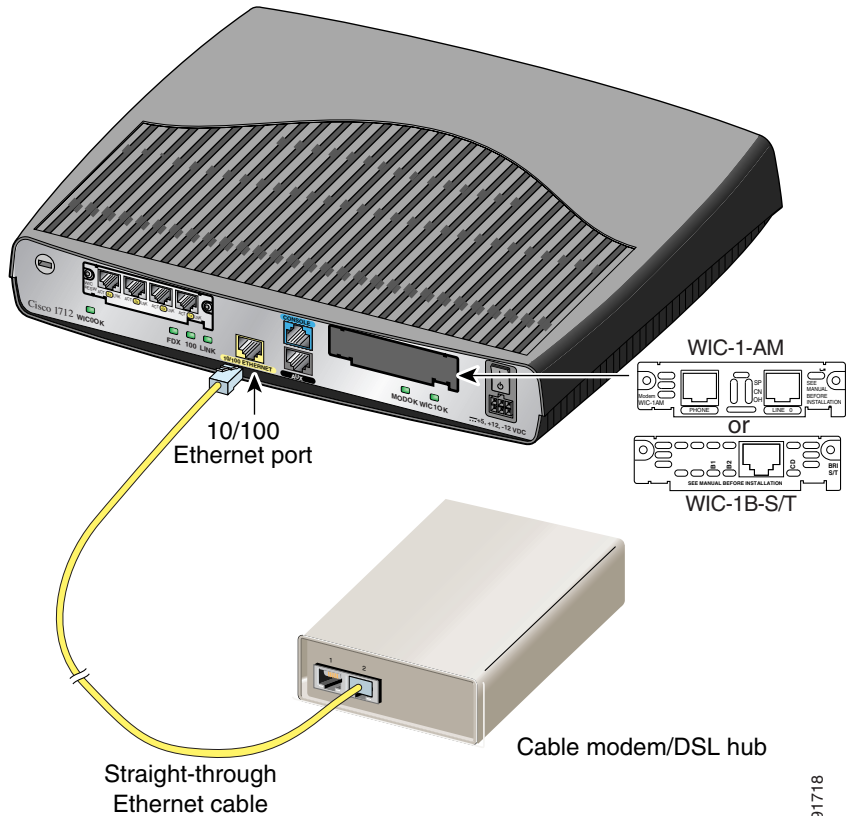
Figure 2-1   Connecting the Router to the Local Network

Step 2 Connect the other end of the cable to a network port on the hub or switch.

Connecting the Router to Your Service Provider's Equipment

You can also connect the Cisco 1711 or Cisco 1712 Security Access router to your service provider's broadband (xDSL or cable) modem equipment by following these steps:

Step 1   Connect one end of the cable to the yellow Ethernet port (labeled 10/100 ETHERNET). See Figure 2-2 for an illustration of this connection.

Figure 2-2   Connecting the Router to Your Service Provider's Equipment

WIC-1-AM

or

WIC-1B-S/T

10/100 Ethernet port

Straight-through Ethernet cable

Cable modem/DSL hub

91718

Step 2   Connect the other end of the cable to a network port on your service provider's broadband (xDSL or cable) modem equipment.
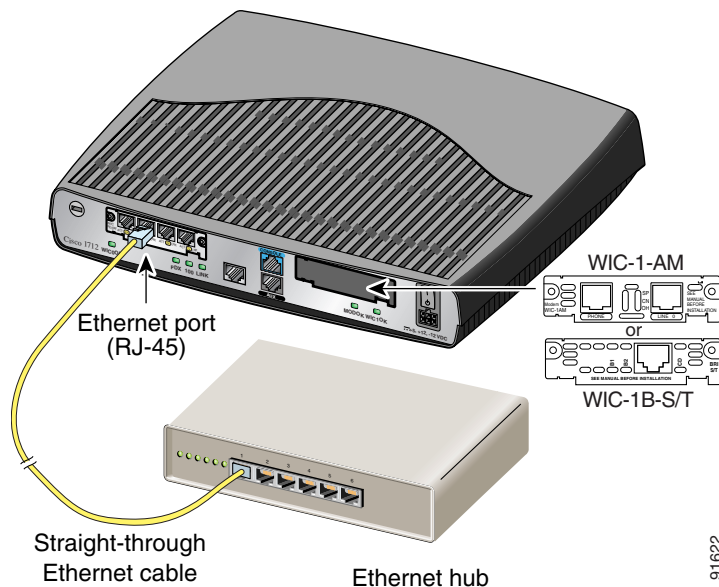
Connecting Networked Devices to the Router's Switch Ports

The Cisco 1711 and Cisco 1712 Security Access routers support connections from a computer with a NIC or other networked device (such as hubs or switches) to the router's integrated 4-port 10/100 Mbps Ethernet switch.

Follow these steps to connect other networked devices to the router's switch ports:

Step 1   Connect one end of an Ethernet cable to the Ethernet Port (RJ-45) as shown in Figure 2-3.

Figure 2-3   Connecting Networked Devices to the Router's Switch Ports

Step 2   Connect the other end of the cable to a port on the hub, switch, or the Ethernet port on your computer.

✎

Note   The example provided in Figure 2-3 on page 2-6 shows connectivity to a hub. The router's Ethernet switch port can be connected to other networked devices, such as a switch or computer with a NIC. If you are connecting the router's switch port to another switch, use a crossover cable.

✎

Note   If you are connecting a computer to the router's switch port, it will take about 30 seconds for connectivity to be established due to the Spanning-Tree Protocol (STP) disabling the ports until a loop-free topology is determined. When you use this type of connection, you must configure the **spanning-tree portfast** command on the router's switch port. The **spanning-tree portfast** command causes a spanning tree port to enter the forwarding state immediately, bypassing the listening and learning states.

⚠

Caution   You can use the portfast feature on switch ports that are connected to a single workstation or PC only to allow those devices to connect to the network immediately, rather than waiting for spanning tree to converge. Do not use the portfast feature on ports that are connected to networking devices such as hubs, routers, switches, bridges, or concentrators.

Connecting Power to the Router

Read the following warnings before connecting the router to power.

⚠

Warning   **The power supply is designed to work with TN power systems.**

⚠️

Warning   **This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120VAC, 15AU.S. (240VAC, 16A international) is used on the phase conductors (all current-carrying conductors).**
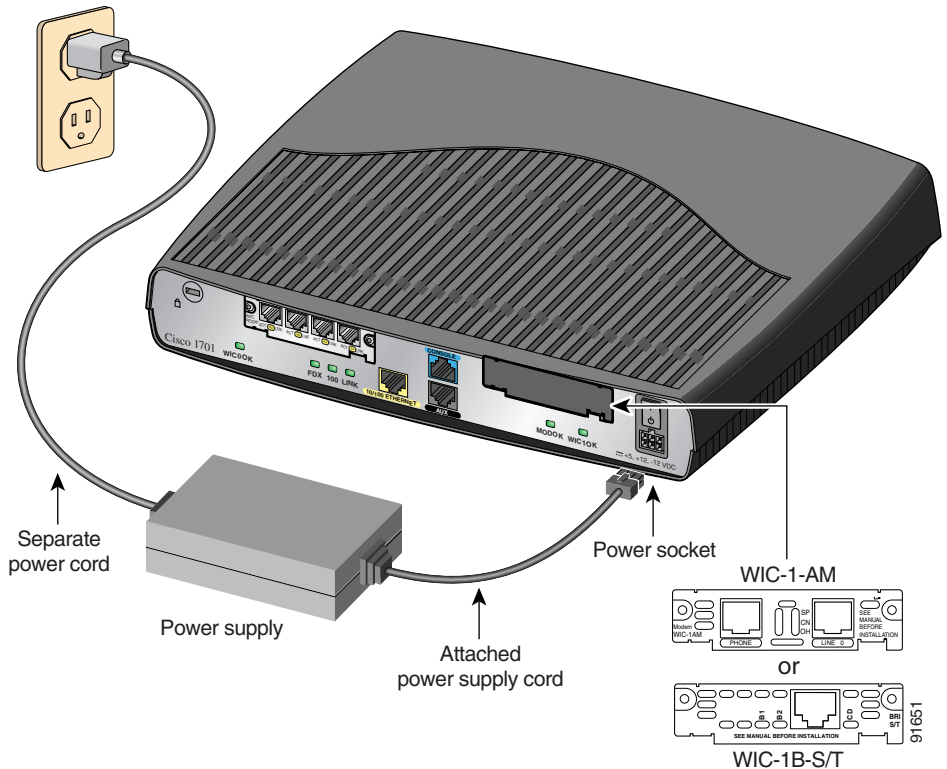
⚠️

Warning   **This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.**

Follow these steps to connect power to the router and to turn the router on:

Step 1   Connect the attached power-supply cord to the power socket (labeled *+5, +12, -12 VDC*) on the router rear panel, as shown in Figure 2-4 on page 2-9.

Figure 2-4   Connecting the Power Supply

- **Step 2**   Connect one end of the separate power cord to the socket on the power supply.
- **Step 3**   Connect the other end of the separate power cord to a power outlet.
- **Step 4**   Press the router power switch to ON (|).
- **Step 5**   Confirm that the router has power by checking that the PWR LED on the front panel is on.

Verifying Your Installation

You can verify that you have correctly installed the router by checking the following LEDs:

- PWR (front panel)—On when power is being supplied to the router.
- OK (front panel)—On when the router software is loaded and functional. Blinking means that the router is performing a power-on self-test (POST).
- WIC0/WIC1 OK (back panel)—On when a WIC is correctly installed in the corresponding WIC slot.
- ETH ACT (front panel)—Blinking when there is network traffic on the local 10/100 Ethernet LAN.
- WIC0ACT or WIC1 ACT (front panel)—See Table 1-3.
- LINK (back panel)—On when the router is correctly connected to the local Ethernet LAN through the 10/100 ETHERNET port.
- MOD OK (back panel)—On when the VPN hardware encryption module is installed and recognized by IOS.

Optional Installation Steps

This section describes some installation steps that you might or might not use, depending on your site and on how you are configuring the router. This section describes the following procedures:

- Connecting a PC to the Router's Console Port
- Connecting a Modem on the AUX Port
- Wall-Mounting
- Stacking the Router
- Unstacking the Router

Connecting a PC to the Router's Console Port

If you want to configure the router by using the Cisco IOS command-line interface, you must connect the router console port to a terminal or PC. The cable and adapter required for this connection are included with the router.

To configure the router by using a PC, the PC must have some type of terminal emulation software installed. The software should be configured with the following parameters:

- 9600 baud

- 8 data bits
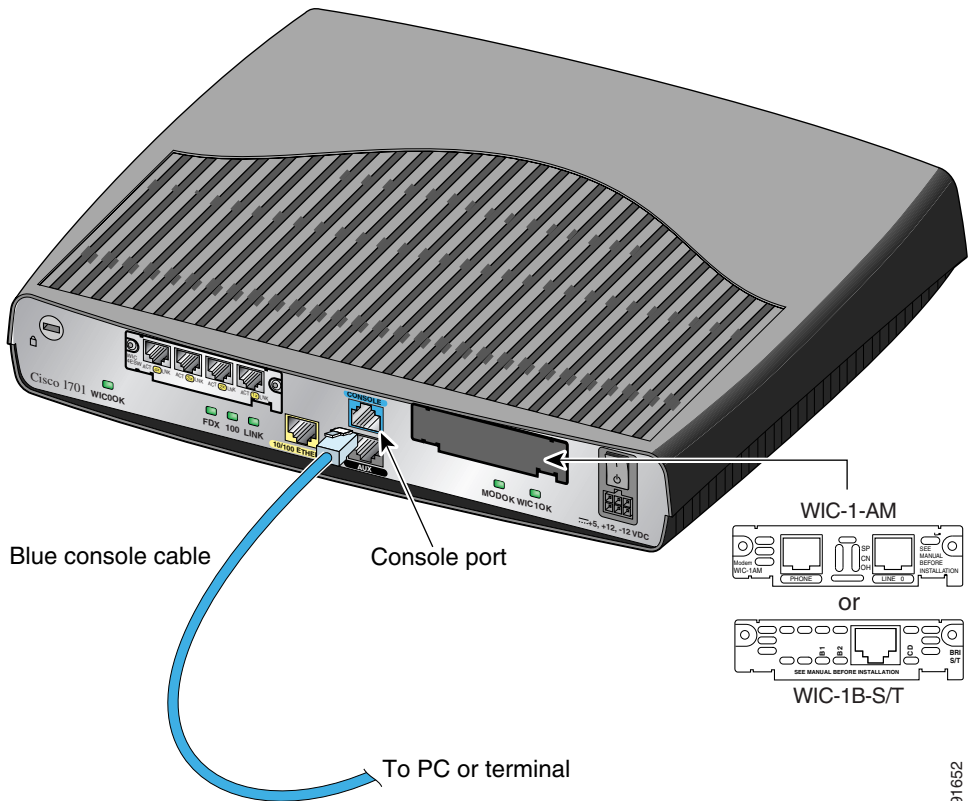
- No parity bits

- 1 stop bit

Note   Refer to the *Cisco 1700 Router Software Configuration Guide* for detailed information about configuring the router using Cisco IOS software.

To connect the Cisco 1711 or Cisco 1712 Security Access router to a terminal or PC, follow these steps:

Step 1   Connect the blue console cable to the blue console port on the back of the router, as shown in Figure 2-5 on page 2-12.

Figure 2-5   Connecting the Console Cable to the Router

Blue console cable

Console port

WIC-1-AM

or

WIC-1B-S/T

To PC or terminal

91652

Step 2   Connect the DB-9 end of the console cable to the console port (also called the *serial port*) on your PC. If this adapter does not fit your PC console port, you must provide an adapter that fits.

Connecting a Modem on the AUX Port

When a modem is connected to the auxiliary port, a remote user can dial into the router and configure it. You can use the blue console cable that came in the accessory kit.
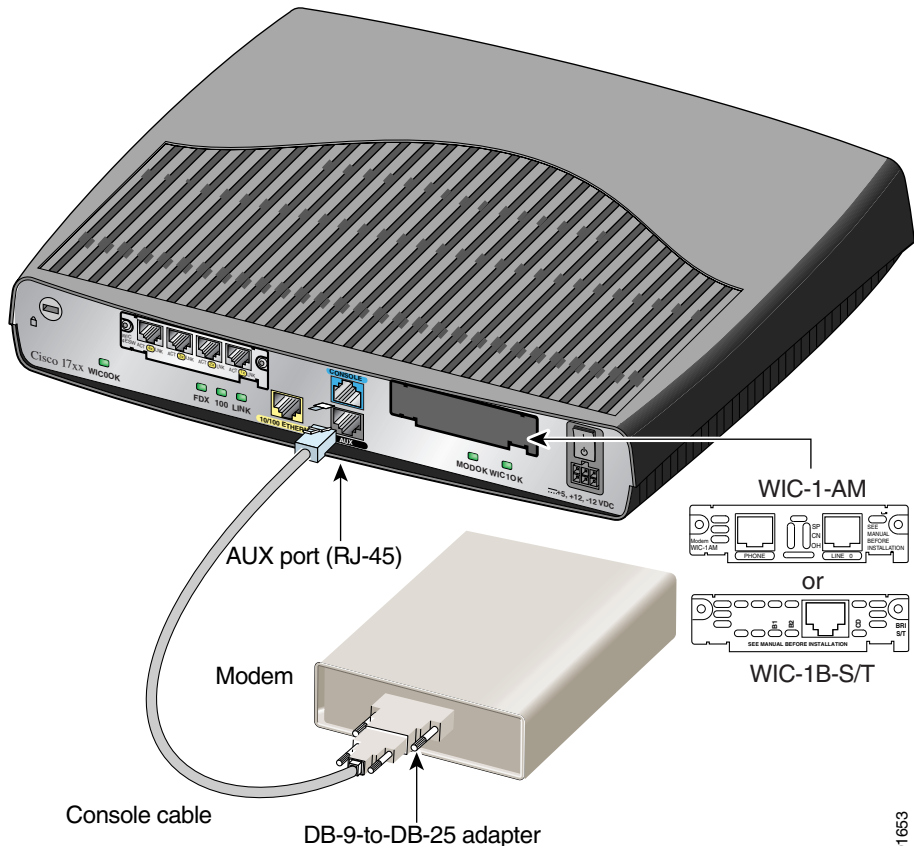
![Note pencil icon]

Note   An external modem is not required for use on the Cisco 1711 Security Access
router WIC-1-AM card.

Follow these steps to connect a modem to the router, using the console cable:

Step 1   Connect the RJ-45 end of the cable to the black AUX port on the back of the
router, as shown in Figure 2-6.

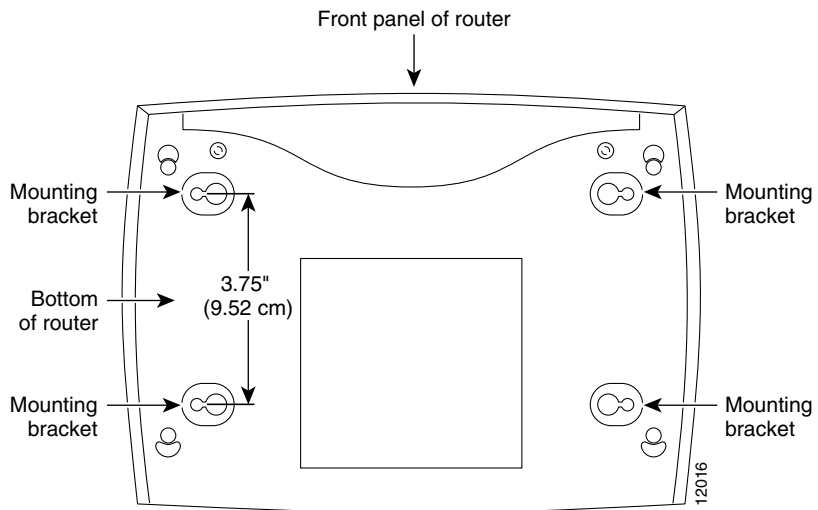*Figure 2-6   Connecting a Modem to the Router's AUX Port*

Step 2   Connect the DB-9 end of the cable to the DB-9 end of the DB-9-to-DB-25 adapter.

Step 3   Connect the DB-25 end of the adapter to the modem.

Wall-Mounting

The Cisco 1711 and Cisco 1712 Security Access routers can be wall-mounted using two number six, 3/4-inch screws and the molded mounting brackets on the bottom of the hub, as shown in Figure 2-7. You must provide the screws. We recommend using pan-head or round-head screws.

Figure 2-7   Wall-Mount Brackets—Bottom of Router

To mount the router on a wall or other surface:

Step 1   Install the two screws 3.75 inches (9.52 centimeters) horizontally apart on a wall or other vertical surface.

The screws should protrude 0.25 inch (0.64 centimeter) from the surface of the wall.

Step 2   Hang the router on the screws with either the left side or right side mounting brackets so that

- The LEDs are visible to the user—Because the LEDs indicate the router operating status, they need to be easily visible.

- The power supply does not hang from its cable—If the power supply is not supported, it might disconnect from the cable that connects it to the router.

⚠

Caution   If you install the screws in drywall, use hollow-wall anchors (1/8 inch by 5/16 inch) to secure the screws. If the screws are not properly anchored, the strain of the cables connected to the router rear-panel connectors could pull the router from the wall.
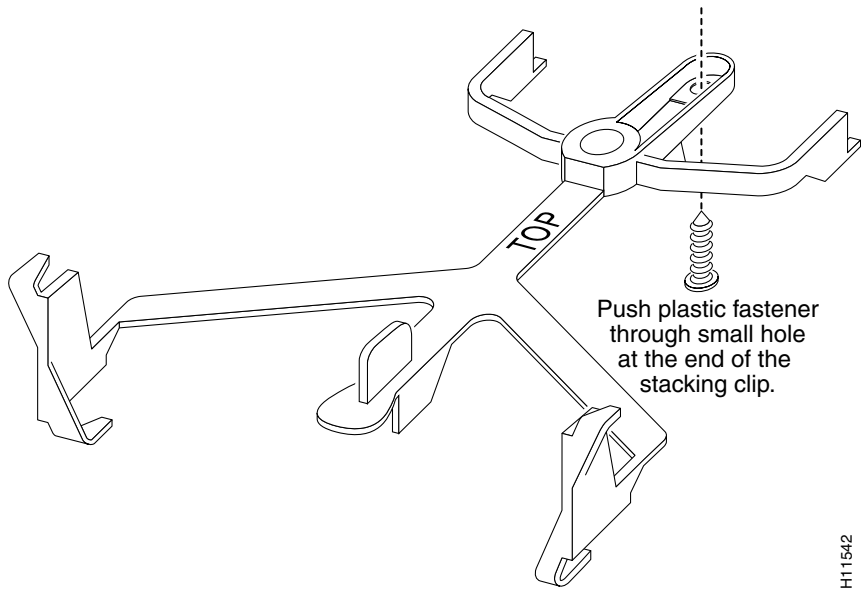
Stacking the Router

You can stack one Cisco 1711 Security Access router and/or one Cisco 1712 Security Access router in a four-device stack, along with other Cisco products designed to be stacked with the router. You can stack each device directly on top of another device.

✎

Note   The Cisco 1711 and Cisco 1712 Security Access routers are not shipped with the stacking equipment described in this section; however, the equipment is included with all other Cisco products that are designed to be stacked.

Each Cisco product designed to be stacked with the router comes with a stacking clip and a fastener for keeping the multiple devices together in a stack. Before you stack the devices, assemble the clip and fastener as shown in .
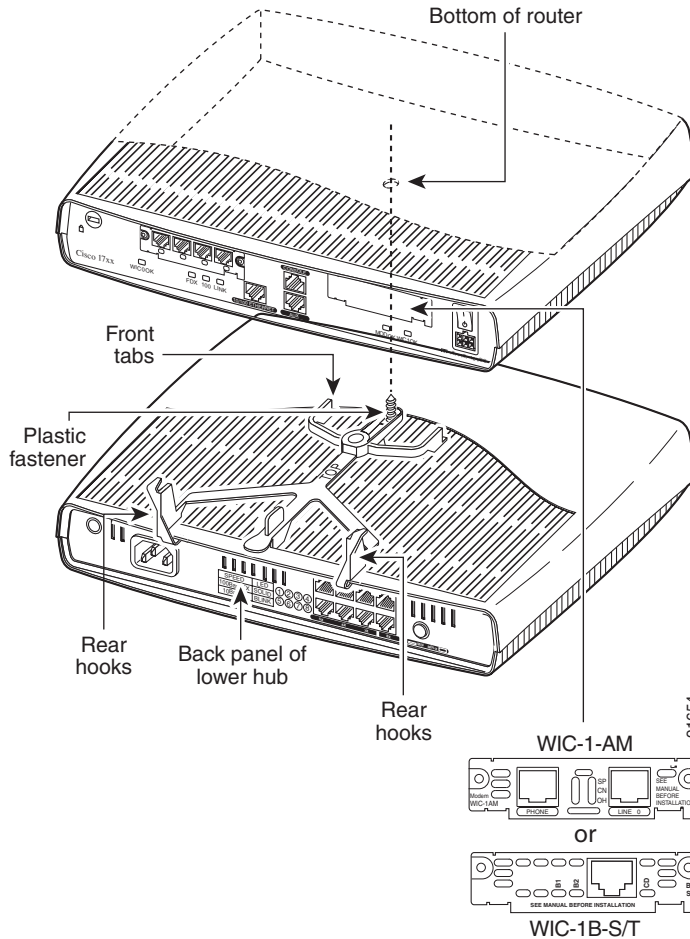
Figure 2-8   Assembling Stacking Clip and Fastener

Push plastic fastener
through small hole
at the end of the
stacking clip.

H11542

After assembling the clip and fastener, follow these steps to stack the router with
another device:

Step 1   Place the clip on top of the lower device, as shown in Figure 2-9 on page 2-17.
Slide the clip forward so that the front tabs slide into the vent slots. Make sure that
the rear hooks fit over the edge of the lower device.
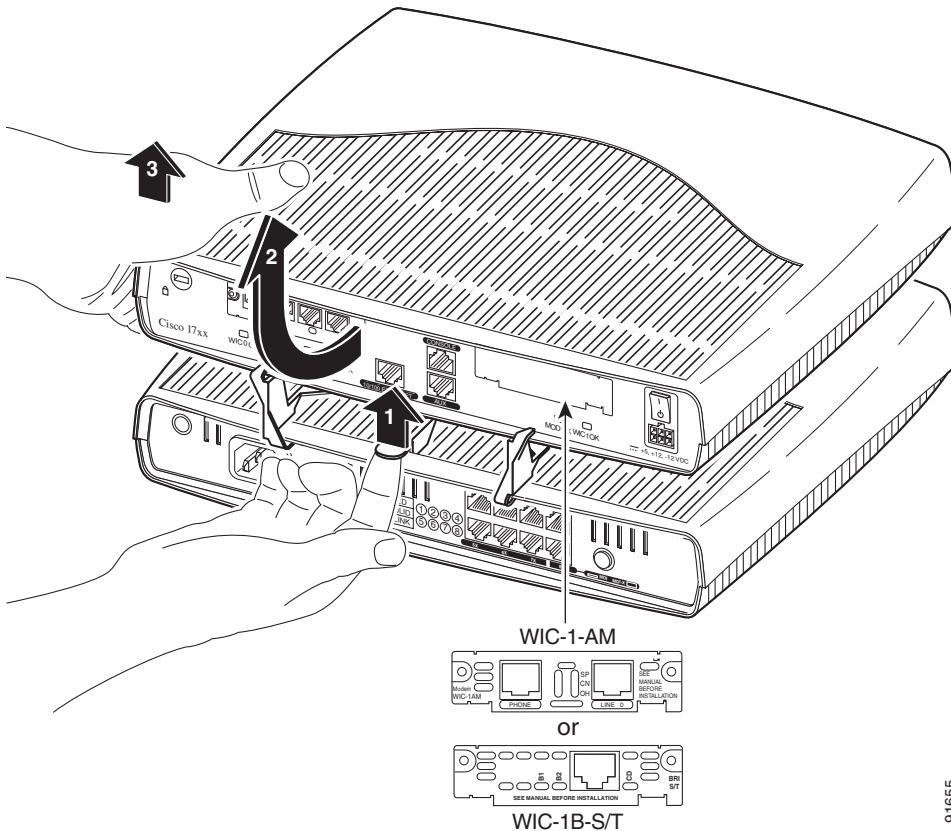
Figure 2-9   Stacking the Router

- **Step 2**   Position the router onto the clips so that the rear hooks fit over the edge of the router.

- **Step 3**   Snap the router to the clip by pushing it down. Make sure that the plastic fastener fits into the bottom of the router.

Unstacking the Router

Follow these steps to unstack the router from another device:

Step 1   Press up on the tab over the center of the lower device to release the clip from the vent, as shown in Figure 2-10.

Figure 2-10   Unstacking the Router

Step 2   Slide the clip and router toward you.

Step 3   Use both hands to lift the router and the stacking clip off the lower device. Afterward, remove the clip from the bottom of the router.

■   **Optional Installation Steps**